

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR2004/001646

## A. CLASSIFICATION OF SUBJECT MATTER

**IPC7 B01J 27/16**

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

B01J, C07C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Patents and applications for inventions since 1975

Korean Utility models and applications for Utility models since 1975

Japanese Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
eKIPASS

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,233,093 A (ARCO Chemical Technology, L. P.) 03 August 1993 see the whole document	1 - 13
A	US 5,962,744 A (The Research Foundation of State University of New York) 05 October 1999 see the whole document	1 - 13
A	US 5,491,266 A (Union Carbide Chemicals & Plastics Technology Corp.) 13 February 1996 see the whole document	1 - 13
A	US 4,450,299 A (Exxon Research and Engineering Co.) 22 May 1984 see the whole document	1 - 13

 Further documents are listed in the continuation of Box C. See patent family annex.

- \* Special categories of cited documents:
- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search  
**11 MARCH 2005 (11.03.2005)**

Date of mailing of the international search report

**11 MARCH 2005 (11.03.2005)**

Name and mailing address of the ISA/KR



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**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International application No.
PCT/KR2004/001646

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5,233,093 A	03.08.1993	JP 6087782 A2 EP 580358 A1 ES 2145762 T3 DE 69328591 C0	29.03.1994 26.01.1994 16.07.2000 15.06.2000
US 5,962,744 A	05.10.1999	AU 3353499 A1 WO 9950214 A1 CA 2326047 AA JP 2000053606 A2 EP 1066236 A1	18.10.1999 07.10.1999 07.10.1999 22.02.2000 10.01.2001
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